

REMARKS

SUMMARY OF THE AMENDMENTS

The present application still contains thirty-five (35) claims, numbered 1-24, 27, 30-32 and 34-40.

Claims 1, 6, 7 and 9 have been amended to make a correction further to an objection raised by the Examiner.

Claims 17, 21, 22, 24, 32, 34 and 36 have been amended to make the same correction and preempt the raising of any objection by the Examiner.

Claim 10 has been amended to clarify the invention being claimed by including a feature present in the other independent claims.

It is believed that no new matter has been added under the present amendment.

CLAIM OBJECTIONS

On page 2 of the Office Action, claims 1 and 6-9 were objected to for reciting the expression "operable to" which, according to the Examiner, suggests or makes optional the features so characterized. It is noted that claims 1, 6, 7 and 9 have been amended so that they now include the expression "configured to". It is respectfully submitted that claims 1, 6, 7 and 9 are now in acceptable form. Claim 8 was not amended as it did not contain the objected to expression.

CLAIM REJECTION(S) UNDER 35 USC 102

On page 2 of the Office Action, claims 1-24, 27, 30-32 and 34-40 were rejected under 35 U.S.C. 102(b) as being anticipated by Han (U.S. Patent 6,430,200). Applicant respectfully disagrees, and submits that the aforementioned claims are not anticipated by Han.

Claim 1

Claim 1 is reproduced below for the Examiner's convenience:

1. A device for integration into a base station of a type that includes at least one radio-transceiver for receiving and transmitting radio communications to a plurality of subscriber stations; the device comprising:

an input device configured to be coupled to the at least one radio-transceiver for receiving a handoff signal from the at least one radio-transceiver at a first mode respective to a first coverage area of the communication system;

an output device for delivering the handoff signal at a second mode respective to a second coverage area;

a converter coupled to said input device and said output device for translating the handoff signal from the first mode into the second mode; the second mode handoff signal for indicating to a subscriber station operating in the second mode within both of the coverage areas to switch from the second mode to the first mode so that the subscriber station operates in the first mode.

It is respectfully submitted that Han does not teach or suggest at least "the second mode handoff signal for indicating to a subscriber station operating in the second mode within both of the coverage areas *to switch from the second mode to the first mode* so that the subscriber station operates in the first mode" (emphasis added).

More specifically, Han discloses an "apparatus and method for generating a pilot signal for hard hand-off" (Abstract). This is basically a "pilot signal generator of a base station for generating an identifying pilot signal corresponding to a target base station to perform inter-frequency hard hand-off" (Abstract). To quote some of the same passages referred to by the Examiner with reference to Fig. 2, Han discloses that "[t]he base station includes a first digital MODEM 200 and an IF amplifier / divider 100. The first digital MODEM 200 produces an intermediate frequency which results in frequency #1. The IF amplifier / divider 100 divides a signal from the digital MODEM 200 into a service RF path unit 500 [...] and an RF path unit

530 [...]” (col. 4, lines 53-60). The MODEM 200 “produces a signal that results in a frequency #1 for actual communication. However, [...] the IF amplifier / divider 100 coupled to the digital MODEM 200 (Fig. 2) transmits a first portion of the divided IF signal through the service RF path unit 500 for generating a frequency #1 (which is utilized for actual communication), and a second portion of the divided IF signal through the RF path unit 530 for producing frequency #3 (which is utilized for generating a pilot signal)” (col. 5, lines 3-13).

Now, of particular note is the fact that although Han is directed to an improved way of generating a pilot signal for hard hand-off, it is nonetheless still a hard hand-off system. Stated differently, Han solves the various “disadvantages associated with the conventional pilot signal generator” (col. 3, lines 5-6), such as size, cost, limited portability and tendency to cause imbalance in coverage areas of multiple frequencies. However, Han still abides by the very principles of hard handoff that he outlines in detailed fashion in the Background section. Specifically, Han states “[a]s a mobile station moves to a target base station, the mobile station simultaneously receives a weak pilot signal from the source base station and a relatively strong pilot signal from the target base station. Accordingly, the mobile station will request a hand-off...” (col. 2, lines 40-43, emphasis added).

Thus, it is a necessary feature that the mobile station continuously monitor the pilot signals of the source base station and that of the “target” base station to detect the aforementioned situation, i.e., where the target base station’s pilot signal becomes stronger than the source base station. Moreover, even once handoff has occurred, the mobile station will likely keep on moving, and further handoff may indeed be required again. In fact, handoff may need to be performed back to the original source base station. Therefore, it is absolutely crucial in Han that the mobile station have the ability to receive the pilot signal of the source base station and the target base station before, during and after hand-off.

Recall now that in Han’s system, the pilot signal of the target base station is at frequency #3, stemming from an original signal at frequency #1. (Frequency #1 is still being used to carry traffic.) To follow in the Examiner’s footsteps, let us try to equate frequency #1 with the claimed “first mode” and frequency #3 with the claimed “second mode”. Let us also assume,

for the sake of argument, that Han's IF amplifier / divider performs the function of the "converter" and effects frequency conversion between frequency #1 and frequency #3. Finally, consider what would happen if, in Han, a "handoff signal" were generated at frequency #1 and were issued onto the pilot signal at frequency #3¹. At this stage, the mobile station is assumed to be receptive to this hypothetical "handoff signal" and is therefore assumed to be "operating in the second mode" (i.e., operating at frequency #3). Upon reception of the hypothetical "handoff signal", it may be the case that, in terms of "actual communication", the mobile station may begin to favor one of the frequencies supported by the target base station. However, and with respect, it cannot be said that the hypothetical "handoff signal" indicates to the mobile station to "switch" "from" the second mode (i.e., frequency #3) "to" the first mode (i.e., frequency #1) as recited in claim 1. This is because, as stated above, the mobile station needs to be able to continue monitoring frequency #3 (the pilot channel of the target base station) in view of future handoff possibilities. Quite simply, although the traffic handled by the mobile station may experience a switch from a traffic channel at frequency #XYZ supported by its current source base station to frequency #1 (or #2) supported by the target base station, there is no "**switch**" **from** frequency #3 (i.e., the pilot channel) **to** #1 (the communication channel), i.e., there is no "**switch**" **from** a "second mode" that carried a handoff signal (converted from a "first mode") **to** that very same "first mode". To contend that such a "switch" does arise in Han would render Han incapable of performing future handoffs, which would be illogical and indeed contradictory to Han itself.

Thus, it is respectfully submitted that Han does not teach or suggest at least "the second mode handoff signal for indicating to a subscriber station operating in the second mode within both of the coverage areas **to switch from the second mode to the first mode** so that the subscriber station operates in the first mode".

As such, Han fails to disclose all the elements of claim 1 and therefore does not anticipate claim 1. The Examiner is therefore respectfully requested to withdraw the rejection of claim 1.

¹ Applicant is not conceding that this is what occurs in Han; rather, Applicant is considering this merely hypothetically to come to a logical conclusion.

Claims 10, 17, 27, 30 and 34

These claims include language similar to that of claim 1 and therefore it is respectfully submitted that claims 10, 17, 27, 30 and 34 also include at least one feature not taught by Han and thus are not anticipated by Han for the same reasons as those set forth above in respect of claim 1. The Examiner is therefore respectfully requested to withdraw the rejection of claims 10, 17, 27, 30 and 34.

Claims 2-9, 11-16, 18-24, 31, 32 and 35-40

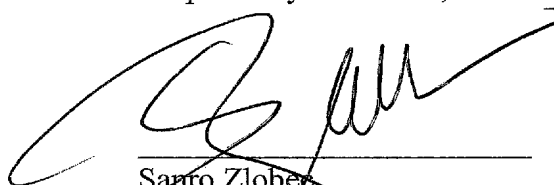
It is noted that each of claims 2-9, 11-16, 18-24, 31, 32 and 35-40 depends from one of claims 1, 10, 17, 30 and 34 and, as such, incorporates by reference all the features contained therein, including at least one feature shown above as not having been taught by Han. It is therefore respectfully submitted that claims 2-9, 11-16, 18-24, 31, 32 and 35-40 are not anticipated by Han and the Examiner is respectfully requested to withdraw the rejection of claims 2-9, 11-16, 18-24, 31, 32 and 35-40.

CONCLUSION

In view of the foregoing, Applicant is of the view that claims 1-24, 27, 30-32 and 34-40 are in allowable form. Favourable reconsideration and withdrawal of all rejections is respectfully requested. Early allowance of the Application is earnestly solicited.

If the application is not considered to be in full condition for allowance, for any reason, the Applicant respectfully requests the constructive assistance and suggestions of the Examiner for placing the application in allowable condition as soon as possible and without the need for further proceedings.

Respectfully submitted,



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